



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3500-1
Job Sheet 179350



Part No: D3500-1

Job Qty: 30 ea

Part Name: Saddle



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/18/18

Job Tracking No:

Due Date: 7/6/18

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV C IPP Rev:A New Issue 06-06-15 JLM

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	30 Ea	7/6/18	7/6/18	0.00	0.00	Start Up Machining-2		SBL 18/08/29
100	CNC Vertical Machining	30 pcs	7/6/18	7/6/18	0.15	37.50	HAAS1-3		SBL 18/08/29
120	QC	30 pcs	7/6/18	7/6/18	0.00	0.00	QC8		18-09-04
130	HandFinish	30 pcs	7/6/18	7/6/18	0.00	0.97	HandFinish1		18/09/04
140	Powdercoat	30 pcs	7/6/18	7/6/18	0.00	0.90	Powdercoat1		18-9-16
150	QC	30 pcs	7/6/18	7/6/18	0.00	0.00	QC3		SEP 10 2018 68
160	Packaging	30 pcs	7/6/18	7/6/18	0.00	0.00	Packaging3-1	ST406.00	SEP 10 2018-89
170	QC21-SA	30 Ea	7/6/18	7/6/18	0.00	0.00	QC21		21 SEP 11 2018

Part Op 100 - Program Batch No. _____ Double check by: _____ 1-Machine Step No 1 per Folio FA641 and inspect per Descriptions: attached Dimension Sheets 2-Machine Step No 2 per Folio FA641 and inspect per attached Dimension Sheets 3-Machine Step No 3 per Folio FA641 and inspect per
140 - START TIME: 9:20 AM. 1:30 PM FINISH 9:50. MB3893.

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6102-013	Saddle Billet	30 Ea (1 ea)	90-Start up Operation	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D6102-013	30	46	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Saddle	1.125Inches + 0.020 - 0.000	1.145 1.125	Radius	
2	Saddle	0.490Inches + 0.020 - 0.000	0.510 0.490	Radius	
3	Saddle	0.615Inches + 0.020 - 0.000	0.635 0.615		
4	Saddle	0.240Inches + 0.020 - 0.000	0.260 0.240		
5	Saddle	1.810Inches + 0.020 - 0.000	1.830 1.810		

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Large Fab ☐	Composite ☐	Supplier ☐																				

Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	Completed By
		Lead hand / Supervisor Approval Verification
		QC / QA Coordinator Approval

DART Aerospace Ltd.
 1270 Aberdeen Street
 Hawkebury, ON K6A 1K7
 CANADA
 TEL.: 1 613 832-5200
 Email: sales@dartaero.com
 www.dartaero.com

Container No: S105264
 Part: D3500 - 1
 Job No: 179350
 Serial No/Batch: S105264
 Revision:
 Inspector:
 Exp Date:
 Instructions: Various STC's
 Date: 08/26/18

Inter
 Trib
 Pa

LT CATEGORY

nqualified 'Unclear	☐ Power Loss/Surge	☐ Positioned Wrong
	☐ Folio/Program	☐ Outside Dimensions
	☐ Grain	☐ Over/Under tolerance
	☐ Weld	☐ Part Incorrect
	☐ Wrong Stock Pulled	☐ Part Lost/Missing
	☐ Out of Sequence	☐ Part Moved
	☐ Off-set	☐ Drawing
	☐ Misabeled	☐ Finish
☐ Fit/Function	☐ Misread	
☐ Misaligned/off center	☐ Turning Sequence	

6	Saddle	0.240Inches	+ 0.020 - 0.000	0.260 0.240	
7	Saddle	0.140Inches	+ 0.020 - 0.000	0.160 0.140	
8	Saddle	0.140Inches	+ 0.020 - 0.000	0.160 0.140	
9	Saddle	0.140Inches	+ 0.020 - 0.000	0.160 0.140	
10	Saddle	0.483Inches	+ 0.007 - 0.000	0.490 0.483	
11	Saddle	1.175Inches	+ 0.010 - 0.000	1.185 1.175	
12	Saddle	3.145Inches	+ 0.010 - 0.000	3.155 3.145	
13	Saddle	1.175Inches	+ 0.010 - 0.000	1.185 1.175	
14	Saddle	0.365Inches	+ 0.020 - 0.000	0.385 0.365	
15	Saddle	0.490Inches	+ 0.020 - 0.000	0.510 0.490	
16	Saddle	0.515Inches	+ 0.020 - 0.000	0.535 0.515	Radius
17	Saddle	1.575Inches	+ 0.020 - 0.000	1.595 1.575	Radius
18	Saddle	0.240Inches	+ 0.020 - 0.000	0.260 0.240	
19	Saddle	0.490Inches	+ 0.020 - 0.000	0.510 0.490	
20	Saddle	3.590Inches	+ 0.060 - 0.000	3.650 3.590	
21	Saddle	0.315Inches	+ 0.007 - 0.000	0.322 0.315	
22	Saddle	0.256Inches	+ 0.006 - 0.000	0.262 0.256	
23	Saddle	6.500Inches	+ 0.020 - 0.000	6.520 6.500	
24	Saddle	5.990Inches	+ 0.020 - 0.000	6.010 5.990	
25	Saddle	2.820Inches	+ 0.010 - 0.000	2.830 2.820	
26	Saddle	2.495Inches	+ 0.010 - 0.000	2.505 2.495	
27	Saddle	2.245Inches	+ 0.010 - 0.000	2.255 2.245	
28	Saddle	1.120Inches	+ 0.010 - 0.000	1.130 1.120	
29	Saddle	0.540Inches	+ 0.020 - 0.000	0.560 0.540	
30	Saddle	0.793Inches	+ 0.010 - 0.000	0.803 0.793	
31	Saddle	0.240Inches	+ 0.020 - 0.000	0.260 0.240	Radius
32	Saddle	0.040Inches	+ 0.020 - 0.000	0.060 0.040	
33	Saddle	0.100Inches	+ 0.020 - 0.000	0.120 0.100	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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DART AEROSPACE LTD		Work Order: 179350
Description: Saddle		Part Number: D3500-1
Inspection Dwg: D3500	Rev: C	DSK: Rev: Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
A	0.483	0.490	✓	0.484	0.484	0.484	0.484	0.484
B	1.175	1.185	✓	1.176	1.177	1.177	1.177	1.177
C	3.145	3.155	✓	3.149	3.149	3.148	3.148	3.148
D	1.175	1.185	✓	1.176	1.177	1.177	1.177	1.177
E	0.365	0.385	✓	0.377	0.377	0.377	0.377	0.377
F	0.490	0.510		0.500	0.500	0.499	0.500	0.500
H	R0.515	R0.535	✓	0.525	0.525	0.525	0.525	0.525
(Note: Dimension I is 0.015" over flange)								
I	R1.575	R1.595	✓	1.575	1.575	1.575	1.575	1.575
J	0.240	0.260		0.257	0.257	0.257	0.257	0.255
K	0.490	0.510		0.500	0.500	0.500	0.500	0.500
L	3.590	3.650	✓	3.62	3.650	3.650	3.650	3.650
M	0.315	0.322	✓	0.316	0.316	0.316	0.316	0.316
N	0.256	0.262	✓	0.257	0.257	0.257	0.257	0.257
O	6.500	6.520	✓	6.510	6.510	6.510	6.510	6.510
P	5.990	6.010		6.000	6.001	6.0005	5.998	6.000
Q	2.820	2.830	✓	2.825	2.825	2.825	2.825	2.825
R	2.495	2.505	✓	2.500	2.500	2.500	2.500	2.500
S	2.245	2.255	✓	2.250	2.250	2.250	2.250	2.250
T	1.120	1.130	✓	1.125	1.125	1.125	1.125	1.125
U	0.540	0.560	✓	0.550	0.550	0.550	0.550	0.550
V	0.793	0.803	✓	0.798	0.798	0.798	0.798	0.798
W	R.240	R.260	✓	0.250	0.250	0.250	0.250	0.250
X	0.040	0.060		0.050	0.050	0.050	0.050	0.050
Y	0.100	0.120		0.105	0.105	0.105	0.105	0.105
AA	R1.125	R1.145	✓	1.135	1.135	1.135	1.135	1.135
AB	R.490	R.510	✓	0.500	0.500	0.500	0.500	0.500
AC	0.615	0.635	✓	0.625	0.625	0.625	0.625	0.625
AD	0.240	0.260		0.258	0.256	0.257	0.256	0.257
AE	1.810	1.830		1.821	1.820	1.8200	1.820	1.820
AF	0.240	0.260	✓	0.252	0.252	0.252	0.252	0.252
AG	0.140	0.160		0.151	0.153	0.155	0.153	0.153
AH	0.140	0.160		0.155	0.155	0.155	0.155	0.153
AI	0.140	0.160		0.155	0.153	0.155	0.153	0.153

Accept/Reject

Measured by: DAS	Date:
Audited by: 20 18-09-04	Date:
Preliminary Approval: 9-39	Date:

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	
D	11.01.17	Note added to Dim I	KJ	
E	15.02.26	Dimension H added	KJ	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



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Work Order update only ☐

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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
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Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
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DART AEROSPACE LTD		Work Order: 179350
Description: Saddle		Part Number: D3500-1
Inspection Dwg: D3500	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

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				#6	#7	#8	#9	#10
A	0.483	0.490 /		0.484	0.484	0.484	0.484	0.484
B	1.175	1.185 /		1.177	1.177	1.177	1.177	1.177
C	3.145	3.155 /		3.148	3.148	3.148	3.148	3.148
D	1.175	1.185 /		1.177	1.177	1.177	1.177	1.177
E	0.365	0.385 /		0.377	0.377	0.377	0.377	0.377
F	0.490	0.510		0.500	0.500	0.500	0.500	0.500
H	R0.515	R0.535 /		0.525	0.525	0.525	0.525	0.525
(Note: Dimension I is 0.015" over flange)								
I	R1.575	R1.595 /		1.575	1.575	1.575	1.575	1.575
J	0.240	0.260		0.256	0.255	0.255	0.255	0.255
K	0.490	0.510		0.500	0.499	0.500	0.502	0.499
L	3.590	3.650 /		3.650	3.650	3.650	3.650	3.65
M	0.315	0.322 /		0.316	0.316	0.316	0.316	0.316
N	0.256	0.262 /		0.257	0.257	0.257	0.257	0.257
O	6.500	6.520 /		6.510	6.510	6.510	6.510	6.510
P	5.990	6.010		6.003	6.002	6.002	6.000	6.002
Q	2.820	2.830 /		2.825	2.825	2.825	2.825	2.825
R	2.495	2.505 /		2.500	2.500	2.500	2.500	2.500
S	2.245	2.255 /		2.250	2.250	2.250	2.250	2.250
T	1.120	1.130 /		1.125	1.125	1.125	1.125	1.125
U	0.540	0.560		0.552	0.550	0.550	0.549	0.550
V	0.793	0.803 /		0.798	0.798	0.798	0.798	0.798
W	R.240	R.260 /		0.250	0.250	0.250	0.250	0.25
X	0.040	0.060		0.050	0.050	0.050	0.050	0.050
Y	0.100	0.120		0.105	0.105	0.105	0.105	0.107
AA	R1.125	R1.145 /		1.135	1.135	1.135	1.135	1.135
AB	R.490	R.510 /		0.500	0.500	0.500	0.500	0.500
AC	0.615	0.635 /		0.625	0.625	0.625	0.625	0.625
AD	0.240	0.260		0.256	0.257	0.257	0.258	0.258
AE	1.810	1.830		1.820	1.820	1.820	1.820	1.820
AF	0.240	0.260 /		0.252	0.252	0.252	0.252	0.252
AG	0.140	0.160	1.50 →	0.150	0.151	0.150	0.150	0.151
AH	0.140	0.160	1.55 →	0.155	0.153	0.153	0.153	0.153
AI	0.140	0.160	1.55 →	0.155	0.154	0.153	0.152	0.152

Accept/Reject

Measured by: DAS	Date: 18/08/28
Audited by: 57	Date:
Preliminary Approval: 9-89	Date:

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	
D	11.01.17	Note added to Dim I	KJ	
E	15.02.26	Dimension H added	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

DART AEROSPACE LTD		Work Order:	179350
Description: Saddle		Part Number:	D3500-1
Inspection Dwg: D3500	Rev: C	DSK:	Rev:
			Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				11	12	13	14	15
A	0.483	0.490		.484	.484	.484	.484	.484
B	1.175	1.185		1.180	1.180	1.180	1.180	1.180
C	3.145	3.155		3.150	3.150	3.150	3.150	3.150
D	1.175	1.185		1.180	1.180	1.180	1.180	1.180
E	0.365	0.385		.377	.377	.378	.377	.378
F	0.490	0.510		.500	.500	.500	.500	.499
H	R0.515	R0.535		.525	.525	.525	.525	.525
(Note: Dimension I is 0.015" over flange)								
I	R1.575	R1.595		1.585	1.575	1.575	1.575	1.575
J	0.240	0.260		.255	.255	.255	.254	.255
K	0.490	0.510		.500	.500	.500	.500	.500
L	3.590	3.650		3.620	3.618	3.620	3.622	3.620
M	0.315	0.322		.316	.316	.316	.316	.316
N	0.256	0.262		.257	.257	.257	.257	.257
O	6.500	6.520		6.510	6.508	6.509	6.508	6.510
P	5.990	6.010		6.000	6.000	6.000	6.002	6.002
Q	2.820	2.830		2.825	2.825	2.825	2.825	2.825
R	2.495	2.505		2.500	2.500	2.500	2.500	2.500
S	2.245	2.255		2.250	2.250	2.250	2.250	2.250
T	1.120	1.130		1.125	1.125	1.125	1.125	1.125
U	0.540	0.560		.550	.550	.550	.551	.550
V	0.793	0.803		.798	.798	.798	.798	.798
W	R.240	R.260		.250	.250	.250	.250	.250
X	0.040	0.060		.050	.050	.050	.050	.050
Y	0.100	0.120		.106	.107	.105	.103	.105
AA	R1.125	R1.145		1.125	1.125	1.125	1.125	1.125
AB	R.490	R.510		.500	.500	.500	.500	.500
AC	0.615	0.635		.630	.630	.632	.630	.633
AD	0.240	0.260		.256	.257	.257	.257	.257
AE	1.810	1.830		1.822	1.822	1.822	1.822	1.822
AF	0.240	0.260		.252	.252	.251	.252	.252
AG	0.140	0.160		.152	.152	.151	.152	.152
AH	0.140	0.160		.153	.154	.153	.152	.154
AI	0.140	0.160		.152	.151	.151	.150	.154

Accept/Reject

Measured by:	DAS	Date:	18/08/28
Audited by:	57 DAS	Date:	
	9-80 20 18-09-04		
Preliminary Approval:	9-80 9-80	Date:	

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	
D	11.01.17	Note added to Dim I	KJ	
E	15.02.26	Dimension H added	KJ	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART AEROSPACE LTD		Work Order: 179350
Description: Saddle		Part Number: D3500-1
Inspection Dwg: D3500	Rev: C	DSK: Rev: Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				#10	#17	#18	#19	#20
A	0.483	0.490		.484	.484	.484	.484	.484
B	1.175	1.185		1.180	1.180	1.180	1.180	1.180
C	3.145	3.155		3.150	3.150	3.150	3.150	3.150
D	1.175	1.185		1.180	1.180	1.180	1.180	1.180
E	0.365	0.385		.377	.378	.377	.377	.377
F	0.490	0.510		.500	.500	.500	.500	.500
H	R0.515	R0.535		.525	.525	.525	.525	.525
(Note: Dimension I is 0.015" over flange)								
I	R1.575	R1.595		1.575	1.575	1.575	1.575	1.575
J	0.240	0.260		.250	.255	.254	.250	.255
K	0.490	0.510		.500	.500	.500	.500	.500
L	3.590	3.650		3.620	3.620	3.620	3.620	3.622
M	0.315	0.322		.316	.316	.316	.316	.316
N	0.256	0.262		.257	.257	.257	.257	.257
O	6.500	6.520		6.510	6.509	6.510	6.510	6.510
P	5.990	6.010		6.002	6.002	6.002	6.000	6.000
Q	2.820	2.830		2.825	2.825	2.825	2.825	2.825
R	2.495	2.505		2.500	2.500	2.500	2.500	2.500
S	2.245	2.255		2.250	2.250	2.250	2.250	2.250
T	1.120	1.130		1.125	1.125	1.125	1.125	1.125
U	0.540	0.560		.550	.550	.550	.549	.549
V	0.793	0.803		.798	.798	.798	.798	.798
W	R.240	R.260		.250	.250	.250	.250	.250
X	0.040	0.060		.050	.050	.050	.050	.050
Y	0.100	0.120		.105	.105	.103	.106	.105
AA	R1.125	R1.145		1.125	1.125	1.125	1.125	1.125
AB	R.490	R.510		.500	.500	.500	.500	.500
AC	0.615	0.635		.630	.628	.628	.628	.625
AD	0.240	0.260		.258	.257	.257	.257	.256
AE	1.810	1.830		1.822	1.822	1.822	1.822	1.822
AF	0.240	0.260		.251	.252	.252	.252	.252
AG	0.140	0.160		.151	.152	.152	.152	.152
AH	0.140	0.160		.153	.154	.154	.153	.154
AI	0.140	0.160		.153	.153	.153	.153	.153

Accept/Reject

Measured by: DAS 87	Date: 18/08/29
Audited by: 9-89 DAS 20 18-09-04	Date:
Preliminary Approval:	Date:

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	
D	11.01.17	Note added to Dim I	KJ	
E	15.02.26	Dimension H added	KJ	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																									
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DART AEROSPACE LTD		Work Order:	17350
Description: Saddle		Part Number:	D3500-1
Inspection Dwg: D3500	Rev: C	DSK:	Rev:
			Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				#21	#22	#23	#24	#25
A	0.483	0.490		.484	.484	.484	.484	.484
B	1.175	1.185		1.180	1.180	1.180	1.180	1.180
C	3.145	3.155		3.150	3.150	3.150	3.150	3.150
D	1.175	1.185		1.180	1.180	1.180	1.180	1.180
E	0.365	0.385		.377	.375	.375	.377	.377
F	0.490	0.510		.500	.500	.500	.500	.500
H	R0.515	R0.535		.525	.525	.525	.525	.525
(Note: Dimension I is 0.015" over flange)								
I	R1.575	R1.595		1.575	1.575	1.575	1.575	1.575
J	0.240	0.260		.255	.255	.255	.255	.256
K	0.490	0.510		.500	.500	.500	.500	.500
L	3.590	3.650		3.620	3.620	3.622	3.622	3.620
M	0.315	0.322		.316	.316	.316	.316	.316
N	0.256	0.262		.257	.257	.257	.257	.257
O	6.500	6.520		6.510	6.509	6.510	6.510	6.510
P	5.990	6.010		6.002	6.002	6.003	6.003	6.003
Q	2.820	2.830		2.825	2.825	2.825	2.825	2.825
R	2.495	2.505		2.500	2.500	2.500	2.500	2.500
S	2.245	2.255		2.250	2.250	2.250	2.250	2.250
T	1.120	1.130		1.125	1.125	1.125	1.125	1.125
U	0.540	0.560		.550	.550	.550	.550	.550
V	0.793	0.803		.798	.798	.798	.798	.798
W	R.240	R.260		.250	.250	.250	.250	.250
X	0.040	0.060		.050	.050	.050	.050	.050
Y	0.100	0.120		.107	.102	.108	.107	.104
AA	R1.125	R1.145		1.125	1.125	1.125	1.125	1.125
AB	R.490	R.510		.500	.500	.500	.500	.500
AC	0.615	0.635		.625	.625	.626	.628	.625
AD	0.240	0.260		.257	.257	.257	.256	.257
AE	1.810	1.830		1.822	1.822	1.822	1.822	1.822
AF	0.240	0.260		.252	.252	.252	.252	.252
AG	0.140	0.160		.152	.152	.152	.152	.152
AH	0.140	0.160		.153	.153	.153	.152	.153
AI	0.140	0.160		.153	.152	.154	.153	.153

Accept/Reject

Measured by:	DAS 57	Date:	18/08/24
Audited by:	9-89 20	Date:	18-09-04
Preliminary Approval:	9-89	Date:	

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	
D	11.01.17	Note added to Dim I	KJ	
E	15.02.26	Dimension H added	KJ	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART AEROSPACE LTD				Work Order: 179320	
Description: Saddle				Part Number: D3500-1	
Inspection Dwg: D3500 Rev: C DSK: Rev:				Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1 26	2 27	3 28	4 29	5 30
A	0.483	0.490		.484	.484	.484	.484	.484
B	1.175	1.185		1.180	1.180	1.180	1.180	1.180
C	3.145	3.155		3.150	3.150	3.150	3.150	3.150
D	1.175	1.185		1.180	1.180	1.180	1.180	1.180
E	0.365	0.385		.377	.377	.377	.377	.377
F	0.490	0.510		.500	.500	.500	.500	.500
H	R0.515	R0.535		.525	.525	.525	.525	.525
(Note: Dimension I is 0.015" over flange)								
I	R1.575	R1.595		1.575	1.575	1.575	1.575	1.575
J	0.240	0.260		.254	.253	.254	.254	.255
K	0.490	0.510		.500	.500	.500	.500	.500
L	3.590	3.650		3.620	3.622	3.620	3.620	3.620
M	0.315	0.322		.316	.316	.316	.316	.316
N	0.256	0.262		.257	.257	.257	.257	.257
O	6.500	6.520		6.510	6.510	6.510	6.510	6.510
P	5.990	6.010		6.002	6.002	6.003	6.002	6.002
Q	2.820	2.830		2.825	2.825	2.825	2.825	2.825
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S	2.245	2.255		2.250	2.250	2.250	2.250	2.250
T	1.120	1.130		1.125	1.125	1.125	1.125	1.125
U	0.540	0.560		.549	.550	.550	.550	.550
V	0.793	0.803		.798	.798	.798	.798	.798
W	R.240	R.260		.250	.250	.250	.250	.250
X	0.040	0.060		.050	.050	.050	.050	.050
Y	0.100	0.120		.107	.105	.107	.107	.107
AA	R1.125	R1.145		1.125	1.125	1.125	1.125	1.125
AB	R.490	R.510		.500	.500	.500	.500	.500
AC	0.615	0.635		.627	.627	.625	.628	.626
AD	0.240	0.260		.257	.256	.256	.256	.256
AE	1.810	1.830		1.822	1.822	1.822	1.822	1.822
AF	0.240	0.260		.252	.252	.252	.252	.252
AG	0.140	0.160		.152	.152	.152	.151	.152
AH	0.140	0.160		.153	.154	.153	.153	.153
AI	0.140	0.160		.152	.153	.153	.153	.153

Accept/Reject

Measured by: DAS 57	Date: 18/08/29
Audited by: 9-89 DAS 20 18-09-04	Date:
Preliminary Approval: 9-89	Date:

Rev	Date	Change	Revised by	Approved
A	06.09.26	New Issue	KJ/EC	
B	08.10.07	Dimension H removed	KJ/DD	
C	08.11.28	Dimension 'M' revised	KJ/EC	
D	11.01.17	Note added to Dim I	KJ	
E	15.02.26	Dimension H added	KJ	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____

Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
<table style="width:100%; border: none;"> <tr> <td style="width:25%; vertical-align: top;"> Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width:25%; vertical-align: top;"> ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due </td> <td style="width:25%; vertical-align: top;"> ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter </td> <td style="width:25%; vertical-align: top;"> FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes </td> <td style="width:25%; vertical-align: top;"> ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center </td> <td style="width:25%; vertical-align: top;"> ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence </td> </tr> </table>					Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due	☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter	FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes	☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence											
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☐ OTHER : _____																					